

Claims:

1. A method for decoding a bit stream representing an image that has been encoded, comprising the steps of:
 - performing an entropy decoding of the bit stream to form a plurality of transform coefficients and a plurality of motion vectors;
 - performing an inverse transformation on the plurality of transform coefficients to form a plurality of error blocks;
 - determining a plurality of predicted blocks based on bidirectional motion estimation that employs said motion vectors, said bidirectional motion estimation including a direct prediction mode and a second prediction mode;
 - adding the plurality of error blocks to the plurality of predicted blocks to form the image.
2. The method of claim 1 wherein said second prediction mode is selected from the group consisting of forward, backward, and interpolated prediction modes.
3. The method of claim 1 wherein said image has an irregular shape.
4. The method of claim 2 wherein said image is a VOP.
5. The method of claim 1 wherein at least two consecutive images are bidirectionally decoded.
6. An apparatus for decoding an image, comprising:
 - a decoder for performing an entropy decoding of a bit stream to form a plurality of transform coefficients and a plurality of motion vectors;
 - an inverse transformer for performing an inverse transformation on the plurality of transform coefficients to form a plurality of error blocks;
 - a motion compensated predictor for determining a plurality of predicted blocks based on bidirectional motion estimation that employs said motion vectors, said

bidirectional motion estimation including a direct prediction mode and a second prediction mode;

an adder for adding the plurality of error blocks to the plurality of predicted blocks to form the image.

7. The apparatus of claim 6 wherein said second prediction mode is selected from the group consisting of forward, backward, and interpolated prediction modes.
8. The apparatus of claim 6 wherein said image has an irregular shape.
9. The apparatus of claim 8 wherein said image is a VOP.
10. The apparatus of claim 6 wherein at least two consecutive images are bidirectionally decoded.